UNIVERSITY OF ALBERTA

INDICES OF MARITAL INTERACTION BETWEEN PARENTS OF ATTENTION DEFICIT DISORDERED CHILDREN

by

GARY JACK MEIERS

©

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to the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements
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in
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DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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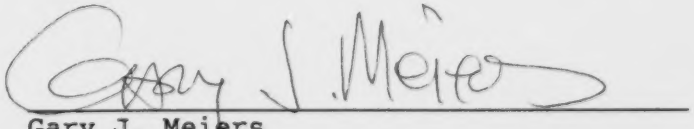

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Abstract

In families with Attention Deficit Disordered (ADD) children, the children have often been identified as the patients without the marital conflict of the parents being considered. This study investigated clinical and non-clinical (control) groups using the Martial Satisfaction Inventory (MSI) and the Conners' Parent Rating Scale (CPRS). The present research assessed differences in marital satisfaction between parents with hyperactive children (Attention Deficit Disorder) and those with non-hyperactive children (Non-Attention Deficit Disorder).

Seventy-two parents participated, resulting in a total of 72 MSI and 92 CPRS protocols. ANOVAs were conducted on 11 MSI subscales. Significances using ADD X CLINICAL interactions were found on the conventionalization (CNV), global distress (GDS), affective communication (AFC), problem solving communication (PSC), differences regarding finances (FIN) and family history (FAM) subscales. Planned comparisons on these interactions revealed that parents with normal children (control non-clinical) described their relationship more positively, were generally more content with their marriages and were more satisfied with the amount of affection and understanding by partners, were more effective in resolving differences, had fewer disagreements about finances, and had had a happier childhood than parents with hyperactive children (ADD non-clinical), clinical children (control clinical), or both (ADD clinical).

In addition, main effects were found in the total time together (TTO), role orientation (ROR), dissatisfaction with children (DSC), and conflict over childrearing (CCR) subscales. Compared to parents with non-hyperactive children, parents with hyperactive children reported greater dissatisfaction with the quality and quantity of leisure time together, more dependence on traditional marital and sex roles, greater dissatisfaction with children, and greater conflict over childrearing practices.

Both parents filled out questionnaires and the fathers' results did not differ significantly from the mothers' results. The Dissatisfaction with Children (DSC) subscale of the MSI was higher for mothers than fathers, but all other scales with similar. Implications are discussed.

Through the MSI and CPRS subscales, the criterion variables, this study was able to show that marital discord and the ADD (hyperactivity) of the child can progressively interact and intensify. This interaction suggests the possible use of family therapy for couples when ADD children are involved.

CHAPTER I

Introduction

Systemic theories of psychotherapy (Haley, 1976; L'Abate, 1986; Madanes, 1981; Minuchin, 1974; Minuchin, et al., 1978; Minuchin & Fishman, 1981) advocate a position that children identified as the 'patients' are in fact members of a larger dysfunctional system which contributes to the development and maintenance of the presenting problem. The child is viewed as both a stimulus activating responses within the system and as a responser, calibrated by transactional patterns that connect the problem behaviour of one person with the behaviour of other people (Keeney & Ross, 1985). From this theoretical position, the clinical implications broaden from a treatment approach involving the child in isolation to focus on the family system and other equally significant systems in which the child lives and functions (e.g., school, community, and church).

In contrast with the systemic perspective used in this study, most literature pertaining to hyperactive children simply deals with behaviour and virtually ignores the social context and its implication for assessment and therapy. Children identified as Attention Deficit Disorder with Hyperactivity (ADDH) (American Psychiatric Association, 1987) represent a relatively common developmental disability with an incidence of about 3% of the population of school-aged children (Barkley, 1989). This handicapping

condition can profoundly affect the academic achievement of children during their school years and can lead to anti-social behaviour, alcohol abuse, and depression when they become adolescents and adults (August, Stewart, & Holmes, 1983; Barkley, 1981; Landers, 1987; Weiss & Hechtman, 1986). DuPaul, Guevremont, and Barkley, (1991) discuss the critical assessment parameters of adolescent ADD.

Most ADD children are prescribed medication either without, or very minimal family therapy once a diagnosis is made. Reasons for a course of action are many. Some clinicians tend to assume that because hyperactivity may have a hereditary, neurophysiologic, or organic basis, the social context in which the hyperactivity symptoms are manifested is of less importance and therefore not worth much attention during assessment or the treatment process (Barkley, 1981). Some clinicians have become discouraged at the enormous complexity of social interactions in families that they choose to ignore these interactions or have blindly endorsed unempirical theories of family systems based more upon armchair hypothesizing than upon scientific analysis (Barkley, 1981).

Authorities on ADD, state that drug therapy is at best a partial treatment for a disorder that can affect the total life (family, social, academic) of these children. Whalen et al. (1987) found that while medication (methylphenidate/

ritalin) did reduce disruptive behaviour among hyperactive children, it did not increase overall sociability. Several medication studies have demonstrated positive effects on behaviour (i.e., reduction in activity levels), but they failed to assess the overall patterns in the family system (whether family members changed their reactions to the child and to each other). Barkley (1981) and Taylor (1980) have hypothesized that destructive marital patterns and the hyperactivity of a child can influence each other and that any therapeutic intervention should address both these issues if any long-term benefit is expected. Patterns of interaction between parents and between the child and parents which may be responsible for maintaining the pathological reactions of the ADD child require investigation.

Objectives of the Current Study

The objectives of the current study will be to a) determine if there is a relationship between parental marital discord and children identified as ADD, b) identify the nature of interaction and conflict resolution strategies employed by the parents in their marital life, c) assess parental agreement/ disagreement about childrearing practices, and d) determine if child behaviour can be statistically predicted from the indices of marital discord or vice versa.

Significance of the Study

1. Considerable research has identified Attention Deficit Disorder as the most commonly diagnosed childhood disorder found in children and families who are counselled in clinics. Frequently ADD children were isolated from the context of their family or classroom and provided medical treatment and/or psychotherapy. These approaches have been moderately successful in reducing the children's activity levels but yet have not proven to be successful in longitudinal studies concerning more significant issues of academic achievement, social skills and the prevention of mental health problems. Some studies (Minuchin, 1974; Minuchin & Fishman, 1981; Minuchin, Rosman, & Baker, 1978) view of a problem child as a member of a larger dysfunctional system which is responsible for maintenance of the problem, has opened a new direction for investigators to explore -- whether marital discord may be the cause or the effect of a problem child in the family. The present study will investigate this assumption by attempting to demonstrate an interactional pattern between marital discord of parents and hyperactivity-related problems of the child.

2. As a corollary to the above, this study will aim to verify the hypothesis that the greater the discord in the marital/parental sub-system, the greater the discrepancy between the parents in the perception of their child's behaviour as a problem. The parent associated with the

child for a longer time is expected to perceive more problem behaviour than the parent who has lesser contact with the child. This finding will be related to how therapeutic procedures dealing with a couple's marital problems should be handled to foster a healthy perception of each other.

3. Finally, this study will investigate whether conflict over childrearing practices among parents has an origin in apparently unrelated interpersonal factors such as sex, finance, communication, and the recreational needs of couples.

To summarize, the findings of this study will seek to help deal with behaviour problems of the ADD child and with the marital problems of couples who have a child (or children) diagnosed as ADD. The findings of this study may also be directed to research in other areas of childhood disorders that may have similar underlying effects on the general mental health of parents.

CHAPTER II

Review of Related Studies

Introduction

This chapter presents related studies according to clinical, observational and statistical research. Clinical research is defined as research that comes out of clinical case studies, clinical theories, and clinical approaches examined for research purposes. This type of research is reported in both journal articles and scholarly texts on this subject. Observational research is defined as research where live observations are used either within homes, schools, clinics or other settings. Statistical research is defined as studies which utilize quantitative research methodology and would fit under the category of experimental designs. All three types of research contribute to furthering the understanding of ADD and marital satisfaction.

Clinical Research

Clinical research often comes from years of observing families, couples, and children in clinical settings. Marriage is the foundation of all other relationships in a family. It sets the tone for the ways in which children relate to each other, and parental behaviour helps to determine how children relate to the parents. Hyperactivity can be a dangerous threat to any marriage. It usually takes a heavy toll as parents undergo various emotional stresses

in trying to deal with the child's hyperactivity. Taylor (1980) has identified twelve of the most common marital destructive situations resulting from hyperactivity. These situations are each presented in the following paragraphs.

Partial Denial. In the partial denial pattern, one spouse denies the hyperactivity while the other recognizes it. The spouse who denies may be criticized as being too emotional and overprotective, while she/he clings blindly to the belief that there is nothing wrong with the child.

Joint Denial. Here the second parent joins the first in denying the existence of hyperactivity and then both parents remain ill-equipped to help the child by maintaining self-defeating explanations for inadequacies in their child's behaviour.

Partial Abuse. This pattern occurs when one parent becomes abusive and threatens to relieve the entire burden of raising the child from the non-abusive parent. To save the child and in some cases the marriage, the non-abusive parent tends to hides the child's misbehaviour from the abusive parent and may become over-involved in assuming parental duties. In either case, the child escapes punishment for wrongdoings.

Joint Abuse. In some cases, the second parent joins the first parent in verbal, emotional, and physical abuse of the child by managing to find reasons for continuing their actions. When the abuse comes to the attention of social

agencies, such couples often move away to avoid the risk of losing their children.

Partial Over-involvement. When one parent becomes over-involved with the hyperactive child by overprotecting, spoiling, infantilizing, nagging, or pitying the child, the other parent starts criticizing the child as well as the other parent to the point of distancing both of them.

Joint Over-involvement. When both parents become over-involved in protecting the hyperactive child, the result is a demanding child who is unprepared to meet the challenges of life and whom is catered to continually by two exhausted and guilt-ridden parents.

Partial Emotional Bankruptcy. In this pattern, one parent declares emotional bankruptcy, forcing the other parent to assume the total parental responsibility. The parent with all the burden may start to feel angry and resentful, while the other parent feels guilty for creating such a situation but may also be quick to justify his/her actions by blaming the child.

Joint Emotional Bankruptcy. Sometimes both parents declare emotional bankruptcy when the second parent responds to the first parent's attempt to unload the parental responsibility. In this situation, there may be a joint attempt to give the child away or offer the child to a social agency.

One-Up. In the one-up situation, both parents allow the primary burden of childrearing to remain with the first parent who suffers not only from the burden of dealing with the child but also from the critical attacks of the second parent. The second parent who is in the one-up position is more at ease with the child, partly because she/he is under-involved in the day-do-day raising of the child and often claims that everything would be all right if only the other parent would change. The one-up parent may undermine the parenting skills of the other by scolding parent for seeking professional help and searching for problems that do not exist.

Mutual One-Up. When one parent counterattacks after being criticized by the other parent, the two parents are then unable to negotiate mutual decisions about the childrearing. Both parents begin to struggle for superiority over the other by blaming each other as incompetent, abusive, weak, and unfit. Such parents may weaken each other's position when one puts the other into a stress situation that she/he cannot cope with and then ridicules the resulting incompetence and inefficiency. This pattern, if continued, can easily end in divorce.

Divided and Conquered. The parents can be deceived by the child's manipulations because of a lack of communication with each other. Some hyperactive children become very skilled at using one parent against the other. The child,

for example, may go to the agreeable parent for permission to do things which she/he knows the other parent would not allow. Another common manipulation is that the child, after being denied permission for something from the first parent, tells the second parent that the first parent has granted permission if the second parent agrees. These children keep driving forward, pushing everything, including the parent's resistance, out of their way to get what they want. In extreme cases, the child may threaten the parent with physical assault, property destruction, or by hurting others. In these cases often the parents already know that their child will do something dangerous if they do not give in.

Overcompensation. The excess of one parental trait in the first parent is responded to by the second parent, who develops too much of the opposite trait. The crucial factor is not that the two parents differ in their preferred amount of softness or hardness toward the child, but the increase in the severity of their approaches. Instead of being pulled together, the parents drive themselves farther and farther apart. The patronizing parent, for example, becomes less and less strict toward the child, while the strict parent feels no excuse to give in because the child is already being excessively given into by the patronizing parent.

Taylor (1980) warns that these twelve destructive marital patterns can often evolve in a sequence of several combinations. In any sequence, the differences between parents grow wider and wider as the child learns to manipulate one parent or the other. In Minuchin's system, this may be synonymous to what they call "the psychosomatic family" (Minuchin, Rosman, & Baker, 1978). They have developed a theoretical position and a consequent psychotherapy treatment model, identified as Structural Family Therapy, which explores the influence of family members on the maintenance of symptomatic behaviour. In studying children with asthma, anorexia nervosa, and childhood diabetes and their families they were able to identify specific recurrent patterns or structures within the family which link together so that they maintain stability and immobilize the family's ability to change. As a result, the family remains symptomatic and members continue to "organize" their behaviour around the identified patient (IP). It is this structural organization which will be assumed to function in such a way as to maintain the IP as the "problem." In other words, the ways in which the family organizes themselves around the IP, and the ways in which the IP is able to organize family members, are considered the significant clinical problem.

Observational Investigations

Observational Investigations within Clinics. Minuchin (1974) uses the term "triangulation" as a specific recursive pattern to identify psychosomatic families. Minuchin et al. (1978) describe the effects of triangulation as follows: "In triangulation, the children are put in such a position that she cannot express themselves without siding with one parent against the other (p. 33)."

Madanes (1981, 1984) supports Minuchin's position by stating that children often create behavioral problems to start a parental response. She maintains that children act out to help mobilize their parents and that a child's symptom is "a message and, as such, it may have a second referent different from the one explicitly stated" (p. 1).

Home and School. Home and school observations of ADD children have proven useful (Dadds, Sanders, Behrens, & James, 1987a). The Family Observation Schedule (FOS) records aggressive and aversive behaviours of parents and children for the purposes of research on marital discord and child behaviour problems (Barkley, 1990). The FOS uses nine behavioral codes for parental behaviour and five for child behaviour. Observational data may prove useful in addition to the paper and pencil tests as used in the present research.

Statistical Research

In a classical study, Minuchin, Rosman, and Baker (1978) demonstrated how emotional arousal may be maintained between parents and the child. Diabetic children were allowed to watch their parents in conversation with the therapist from behind a one-way mirror. As the interview was in progress, the parents and children had blood samples removed to measure the concentration of free fatty acids (FFA), a marker for emotional arousal. While the children observed from behind the one-way mirror, the therapist intensified the interaction between the mother and father; both the child's and the parents' FFA increased. As the child was brought from behind the observation room and introduced into the interview, the parents shifted their focus away from their own conflict to the child in one of two ways: by directly focusing their attention on the child or by shifting in the content of their conversation from their own issues as a couple to issues related to the child. As this shift occurred, the parents' FFA decreased and the child's FFA increased.

It is hypothesized that a similar transaction may be responsible for hyperkinesis and other emotional responses in ADD children which are subsequently generalized to child's total environment. Keeney et al. (1971) found that out of 100 children referred to a psychiatric clinic for "minimal brain dysfunction," over half the children lived in

environments of chronic deprivation with parents demonstrating criminal tendencies and "overt emotional instability." They concluded that hyperactive children may have the same constitutional predisposition. "Given environmental circumstances which are less stressful, children might be able to maintain levels of activity which are generally acceptable" (p. 622).

Kaslow (1979) found that a commonly observed pattern in families with an IP was that the mothers maintained an overly close relationship with the child while the fathers maintained a distant relationship with the child. Barkley (1989) explains this and other findings which support this view in terms of the fact that these mothers are in contact with the child for a substantially longer time than the fathers, who are at work most of the day.

After an extensive review, Emery (1982) concluded that marital unhappiness and conflict are related to behaviour problems in those children referred to clinics for treatment. He found a particularly strong relationship between marital discord and "uncontrolled" behaviour in children, especially boys. Mash and Johnston (1982) found that parents reported four times more conflict between the hyperactive child and siblings than matched controls. Brody, Stoneman, and Burke (1987) report that the behaviour of siblings may have implications for marital discord:

> Low marital quality was most strongly related to antagonistic behaviour in both older and younger

> siblings; in addition, younger siblings displayed more antagonistic behaviour when the older siblings were reported to have highly active temperaments. Marital disharmony was found to undermine children's functioning directly by increasing the inconsistency of parenting behaviour as the parents became preoccupied with their marital problems. (Brody et al., 1987, p. 566)

In the presence of marital discord, the simple solution of teaching parents behaviour modification skills misses the point. The utilization of behaviour modification relies on consistency by both parents. Failure to address the issue of marital discord will likely lead to failure for the family system.

Often behaviour problems of the child are viewed differently by different parents. Rosenberg and Joshi (1986) found that differences in parental perception of the child's behaviour problems positively co-vary with marital discord. The greater the marital discord, the greater the differences in the parents' ratings of behavioral difficulties in the child. Therefore Barkley (1989) recommends that both parents and teachers be used to minimize the possibility of false positives in the diagnosis of ADD.

Ritterman (1978) investigated the family factor in her statistical study of family therapy with Ritalin or a placebo. She states, "It would seem that a major determinant of a child's drug, placebo, and family therapy treatment response is his family, i.e., his parent's

relationship with him and their expectations for treatment" (p. 167). She suggests that given the risks of Ritalin in terms of physical side effects and cardio-vascular effects and the profound role of expectation in families with hyperactive children, if a pill is to be used, a placebo might be tried first, or the expectational aspects of the placebo should be replicated in some form of psychotherapy, which also can hold an expectational placebo-like quality. Ritterman also suggests that, "protective/positive families receive family therapy treatment alone rather than pill inclusive treatments given their apparent preference for treatments which most clearly involve their participation in the child's symptoms and treatment" (p. 68).

Limitations of the Literature

One must question the limitations of literature pertaining to hyperactive children which deals simply with behaviour and virtually ignores the social context and its implications for assessment and therapy. As noted previously, most cases of ADD are prescribed medication either without, or with minimal family therapy once a diagnosis is made. Some clinicians have ignored or minimized family therapy and the broader social context in which the hyperactivity symptoms manifest themselves. Therefore, the family context has not been valued or given much attention in the assessment or the treatment process. Clinicians cannot afford to be so discouraged by the

complexity of social interactions in families that they choose to ignore these interactions (Barkley, 1981).

The non-use of observational data such as that used by Dadds, Sanders, Behrens, & James, 1987a) suggests a possible limitation of the present study. One might ask what design improvements occurred in this study to compensate for the lack of observational data. This study used instruments which did not call for observational data to supplement them since the incorporation of a control group allowed the researcher to compare both marital satisfaction and child behaviour for both clinical and non-clinical populations, making it unnecessary to use additional observational data.

Why Family Therapy?

Family therapy theory and research has shifted its focus from etiology or "origin" of the disorder such as ADD symptoms to current transactional patterns in the family in which the individual is embedded (Walsh & Anderson, 1987).

Environmental and family factors have been explored (Landers, 1987) and the home environment was noted as interacting significantly with risk of hyperactivity. Campbell (1985) stated that marital distress, maternal depression, and negative patterns of parent-child interaction were associated with the child's behaviour disturbance at age three. In addition, Ditton, Green and Singer (1987) studied communication deviance in families with learning disabled (LD) children versus normal achieving

children. Raters were able to correctly identify 87% of the communication transcripts of the parents of LD children based upon the high frequency of communication deviances. They correctly identified 77% of the transcripts of normal students. Clearly, family communications are affected for the LD children who are also ADD. Working with families would be an effective approach to addressing these communication deviances. Communication deviance is defined as those oddities of language usage that may obfuscate the meaning of the communication or leave the listeners confused as to where to focus their attention (Ditton et al. 1987). This would be expected to affect communication, problem solving, and other criterion variables measured by the MSI.

Research Hypotheses

From the brief overview of the current research in the area of the family dynamics of hyperactive children, the following research hypotheses were formulated:

1. Parents of ADD children will demonstrate (significantly) higher levels of distress in affective communication, problem solving communication, and other forms of pathological interaction when compared to the normative data base utilized in the MSI and when compared to the Non-ADD Non-Clinical families.

2. Parents of ADD children will demonstrate higher levels of dissatisfaction with their children and higher

levels of conflict over childrearing practices when compared with parents of Non-ADD children.

3. Looking at correlation coefficients between subscales of the MSI and subscales of the CPRS, there will be significant correlation between the MSI subscales which address how parents rate their children on problem behaviours and the CPRS subscales which measure ratings of child behaviours problems.

4. Marital discord and hyperactivity problems of the child will be interdependent and statistically predictable from each other.

Each of these hypotheses will be investigated utilizing the subscales of either the MSI, the CPRS, or both.

1. The first hypothesis will be investigated according to the MSI subscales.

2. The second hypothesis will be investigated using measures on the MSI.

3. The third hypothesis will be measured utilizing all of the Conners' Rating Scale.

4. The fourth hypothesis will be measured by both the MSI and the CPRS.

CHAPTER III

Method

Subjects

Twenty-eight children identified as ADD were selected from the paediatric and psychiatric clinics at the University of Alberta Hospitals. Those children who had other major illnesses in addition to ADD were excluded from the study. Both mothers and fathers were invited to participate, however two single mothers were also included. A control group of parents with non-ADD children was sought at the University of Alberta from the staff and the graduate student populations. A third group consisted of parents and children in family therapy (Clinical population) with children, who may or may not have been diagnosed, but who were not ADD.

Definitions of Groups

ADD Non-Clinical: This group consisted of children of elementary school age who were diagnosed as Attention Deficit Disordered by a physician and who were not receiving psychological treatment. Their families or parents were not receiving therapy either. (N=8)

Non-ADD, Non-Clinical: The non-ADD, non-clinical, group was selected from the University of Alberta graduate students and staff/professors who had a child or children of elementary school age. These families were not involved in

psychological treatment nor had they received psychological treatment in the past. (N=7)

ADD Clinical: These elementary school aged children were diagnosed as having ADD by a physician. Their families received therapy from the experimenter/therapist. All of these families were referred to the experimenter by one of two sources, Alberta Family and Social Services or a school psychologist/psychiatrist working for Edmonton Public Schools. (N=5)

Non-ADD Clinical: This group was composed of families who were in family therapy where the child was the identified problem. These children were not Attention Deficit Disordered. (N=15)

Procedure

The parents of selected ADD children were contacted to participate in the study. The parents of each child were mailed or given personally, by hand, a packet containing an introductory letter, two marital satisfaction inventories, two Conners' behaviour check lists, and a stamped envelope with a return address. The introductory letter briefly described the purpose and goal of the study along with a request to complete the two questionnaires separately by each parent and to return them as soon as possible using the return envelope. A small amount of money ($10.00) was sent to each family as a token of appreciation for their time on receipt of the completed questionnaires. A similar

procedure was used with the Control group (non-ADD, not in therapy) and the Clinical group (non-ADD, in therapy).

The Instruments

(A) The Marital Satisfaction Inventory (MSI)

(See Appendix B)

The MSI is designed to identify both the nature and intensity of marital distress areas within spousal interaction. The 280-item inventory includes one validity scale, one global satisfaction scale, and nine additional scales assessing specific dimensions of marital interaction. The MSI is administered to individual spouses independently and requires approximately 30 minutes to complete. The test-retest reliability over a 9 week interval has shown the stability of MSI scores with coefficients for individual scales ranging from .84 to .94 (Mean=.89). The internal consistency (alpha) coefficients range from .80 to .97 (Mean=.88). The contents of the 11 scales are as follows:

Conventionalization (CNV). This validity scale assessed individual's tendencies to distort the appraisals of their marriage in a socially desirable direction. Items reflected denial of commonly occurring marital difficulties and efforts to describe the relationship in an overly positive manner.

Global Distress Scale (GDS). This measure assessed the respondents' overall dissatisfaction with the marriage. Items reflected general marital discontent, chronic

disharmony, desire for marital therapy and consideration of separation or divorce.

Affective Communication (AFC). This scale focused on the process of verbal and nonverbal communication and was the best single index of the affective quality of the couple's relationship. Items reflected spouse's dissatisfaction with the amount of affection and understanding by their partners.

Problem-Solving Communication (PSC). This communication scale assessed the couple's general ineffectiveness in resolving differences. Items measured overt disharmony rather than underlying feelings of detachment or alienation.

Time Together (TTO). Items on this scale reflected a lack of common interests and dissatisfaction with the quality and quantity of leisure time together.

Disagreement About Finances (FIN). This scale assessed marital discord regarding the management of family finances. Items dealt with financial insecurity, inability to discuss finances calmly, and a view of the spouse as extravagant.

Sexual Dissatisfaction (SEX). Items on this scale reflected dissatisfaction with both the frequency and quality of intercourse and other sexual activities.

Role Orientation (ROR). This scale reflected the adoption of a traditional versus nontraditional orientation toward marital and parental sex roles. Items were scored in the nontraditional direction.

Family History and Distress (FAM). Items reflected an individual's unhappy childhood and disharmony in the marriage of the respondents' parents and extended family.

Dissatisfaction with Children (DSC). This scale assessed parental dissatisfaction or disappointment with children. Items reflected the parent-child relationship rather than the relationship between spouses.

Conflict Over Childrearing (CCR). Items assessed the extent of conflict between spouses regarding childrearing practices and parental responsibilities.

(B) Conners' Parent Rating Scale (CPRS)

The Conners' Parent Rating Scale (Conners, 1989) was used to characterize patterns of child behaviour and to compare them to levels of appropriate normative groups. The 48-item parent questionnaire (CPRS-48) was rated on a four-point scale indicating the intensity of the child's inappropriate behaviour. The CPRS-48 included scales for (a) Conduct Disorder, (b) Learning Problem, (c) Psychosomatic Problem, (d) Impulsive-Hyperactive, (e) Anxiety, and (f) a 10-item Hyperactivity Index. The Hyperactivity Index was included to provide empirical assessment of the extent to which the child performs behaviours which are usually considered as indicative of an underlying diagnosis of hyperkinesia and most sensitive to drug effects. The most common way of interpreting the Conners' Parent Rating Scales is through the interpretation

of individual scale scores. The individual scale scores are compared with norms for appropriate groups of children not specifically identified as having a diagnosable behaviour problem. High scale scores are indicative of having a problem while low scale scores indicate the absence of the problem.

The internal consistency reliability of CPRS is in the range of .13 to .65 (Goyette, Conners & Ulrich, 1978). The alpha internal consistency reliability coefficient is .92 for the Hyperactivity Index, corrected for length (Sandberg, Wieselberg, & Shaffer, 1980). Product moment correlations between mother's and father's ratings on the CPRS range from .46 to .57, with .55 for the Hyperactivity Index. Additionally, the factorial stability of CPRS is reported to be adequate over time (Conners, 1989). Finally, the CPRS is based upon extensive normative data on a sample of 9583 Canadian children aged 4 to 12 years. Norms are presented separately for groups formed by age and by gender.

Data Analysis

When the questionnaires were received, they were scored on the 11 subscales in the MSI and the 6 subscales in the CPRS. Then the following statistical operations were performed to answer the questions raised in the first chapter of this proposal:

1. The 11 subscales of the MSI and the 6 subscales of the CPRS were used to generate a 17 x 17 correlation matrix

to analyze the relationship between marital satisfaction and perceived hyperactivity of the child. The correlation matrix provided information on whether any specific subscale of the MSI is related significantly to any specific Conners' Parent Rating Scales and whether that pattern of relationship is consistent for both parents.

2. A number of stepwise regression analyses were performed taking each of the CPRS scales as criterion and the MSI scales as predictors and then each of the MSI scales as criterion and the CPRS scales as predictors. The mothers' and fathers' responses were treated separately in two different series of regression analyses to see if statistical prediction of one behaviour from the other was different or similar for each parent. The regression analysis involved a stepwise procedure where one factor was inserted and the regression on the remaining data processed. The stepwise analysis is superior to a forward procedure and a backward procedure because it is the combination of both. It is the method of choice (even over the force entry procedure) when multi-collinear variables exist. In the stepwise regression analysis there is a second factor considered with the primary factor excluded from the remaining scale.

3. There was an ANOVA performed on the subscales based on the group sample sizes and the number of dependent

variables. The next stage of analysis involved correlations, treating each subscale separately.

4. In the final stage of the analyses, the responders (fathers and mothers) were divided into two groups. This was done on the basis of the Global Distress Scale results. The parents were divided into low (scoring 40-65) and high (scoring 66-80), representing low marital satisfaction and high marital satisfaction groups. Originally, a Multivariate Analysis of Variance (MANOVA) was planned to be performed if the group samples were large enough to isolate any group differences on the 6 hyperactivity scales. Instead, ANOVA analyses were performed as this was more appropriate.

CHAPTER IV

Results

Seventy-two parents (37 mothers, 35 fathers) participated in the study. Parents with more than one child provided CPRS scores for each of their children, resulting in a total of 72 MSI and 92 CPRS protocols. The number of protocols, as well as the mean and standard deviation for each of the subscales obtained by the different groups of participants, are summarized in Table 1.

To assess the difference in marital satisfaction between parents with hyperactive children and those with non-hyperactive children, between clinical and non-clinical parents, and between fathers and mothers both independently and interactively, a series of ADD (hyperactive versus control) X CLINICAL (clinical cases versus non-clinical cases) X SEX (of parents) ANOVAs on the 11 MSI subscales were conducted. Results showed significant ADD X CLINICAL interactions on the CNV ($F_{1,64}=5.43$, $p < 0.05$), GDS ($F_{1,64}=4.68$, $p < 0.05$), AFC ($F_{1,64}=8.70$, $p < 0.01$), PSC ($F_{1,64}=7.27$, $p < 0.01$), FIN ($F_{1,64}=4.14$, $p < 0.05$), and FAM ($F_{1,64}=5.06$, $p < 0.05$) subscales respectively. Planned comparisons of these interactions further revealed that parents with normal children (control non-clinical) described their relationship in a more positive manner ($t_{64}=4.53$, $p <0.01$), were generally more content with their marriages ($t_{64}=5.00$, $p < 0.01$), were more satisfied with the

Table 1

Means and Standard Deviation for Groups on MSI and CPRS

F=Female M=Male				MARITAL SATISFACTION INVENTORY (MSI)		
GROUP CHARACTERISTICS			N	CNV	GDS	AFC
ADD	Clinical	F	5	$\bar{X}$= 38.8 S= 2.68	$\bar{X}$= 71.2 S= 4.97	$\bar{X}$= 62.2 S= 10.99
ADD	Clinical	M	5	$\bar{X}$= 48.4 S= 3.44	$\bar{X}$= 56.4 S= 7.86	$\bar{X}$= 56.6 S= 8.99
ADD	Nonclinical	F	10	$\bar{X}$= 45.0 S= 13.98	$\bar{X}$= 61.8 S= 13.58	$\bar{X}$= 57.4 S= 13.62
ADD	Nonclinical	M	8	$\bar{X}$= 49.3 S= 13.00	$\bar{X}$= 60.4 S= 15.64	$\bar{X}$= 55.5 S= 14.27
NON-ADD	Clinical	F	15	$\bar{X}$= 41.3 S= 4.17	$\bar{X}$= 61.1 S= 11.33	$\bar{X}$= 61.9 S= 7.60
NON-ADD	Clinical	M	15	$\bar{X}$= 43.7 S= 6.73	$\bar{X}$= 58.3 S= 11.90	$\bar{X}$= 59.9 S= 13.37
NON-ADD	Nonclinical	F	7	$\bar{X}$= 55.3 S= 8.18	$\bar{X}$= 44.9 S= 3.67	$\bar{X}$= 42.3 S= 4.23
NON-ADD	Nonclinical	M	7	$\bar{X}$= 58.0 S= 11.25	$\bar{X}$= 44.7 S= 3.25	$\bar{X}$= 41.0 S= 5.00

F=Female M=Male				MARITAL SATISFACTION INVENTORY (MSI)		
GROUP CHARACTERISTICS			N	PSC	TTO	FIN
ADD	Clinical	F	5	$\bar{X}$= 60.6 S= 10.78	$\bar{X}$= 61.0 S= 11.75	$\bar{X}$= 62.8 S= 12.46
ADD	Clinical	M	5	$\bar{X}$= 56.4 S= 8.20	$\bar{X}$= 58.2 S= 7.56	$\bar{X}$= 49.4 S= 9.07
ADD	Nonclinical	F	10	$\bar{X}$= 59.5 S= 11.51	$\bar{X}$= 59.4 S= 13.95	$\bar{X}$= 58.4 S= 16.05
ADD	Nonclinical	M	8	$\bar{X}$= 57.9 S= 11.58	$\bar{X}$= 56.8 S= 14.21	$\bar{X}$= 52.5 S= 14.78
NON-ADD	Clinical	F	15	$\bar{X}$= 56.7 S= 10.47	$\bar{X}$= 56.1 S= 9.72	$\bar{X}$= 53.5 S= 9.84
NON-ADD	Clinical	M	15	$\bar{X}$= 57.3 S= 11.79	$\bar{X}$= 58.3 S= 11.25	$\bar{X}$= 52.9 S= 7.66
NON-ADD	Nonclinical	F	7	$\bar{X}$= 43.9 S= 4.18	$\bar{X}$= 51.3 S= 7.57	$\bar{X}$= 43.1 S= 9.58
NON-ADD	Nonclinical	M	7	$\bar{X}$= 42.1 S= 6.89	$\bar{X}$= 45.9 S= 5.58	$\bar{X}$= 47.3 S= 5.94

F=Female M=Male				MARITAL SATISFACTION INVENTORY (MSI)		
GROUP CHARACTERISTICS			N	SEX	ROR	FAM
ADD	Clinical	F	5	$\bar{X}$= 55.6 S= 10.92	$\bar{X}$= 52.0 S= 11.16	$\bar{X}$= 53.0 S= 8.37
ADD	Clinical	M	5	$\bar{X}$= 55.0 S= 7.11	$\bar{X}$= 54.0 S= 8.57	$\bar{X}$= 51.8 S= 8.75
ADD	Nonclinical	F	10	$\bar{X}$= 51.6 S= 12.55	$\bar{X}$= 55.1 S= 8.72	$\bar{X}$= 50.4 S= 8.81
ADD	Nonclinical	M	8	$\bar{X}$= 50.0 S= 10.85	$\bar{X}$= 58.6 S= 5.95	$\bar{X}$= 55.8 S= 12.12
NON-ADD	Clinical	F	15	$\bar{X}$= 53.5 S= 10.40	$\bar{X}$= 58.7 S= 9.78	$\bar{X}$= 54.2 S= 7.39
NON-ADD	Clinical	M	15	$\bar{X}$= 52.9 S= 10.38	$\bar{X}$= 59.2 S= 7.24	$\bar{X}$= 55.3 S= 10.65
NON-ADD	Nonclinical	F	7	$\bar{X}$= 51.6 S= 11.41	$\bar{X}$= 59.4 S= 6.13	$\bar{X}$= 43.4 S= 11.75
NON-ADD	Nonclinical	M	7	$\bar{X}$= 51.0 S= 8.76	$\bar{X}$= 60.7 S= 5.59	$\bar{X}$= 44.9 S= 9.81

F=Female M=Male				MARITAL SATISFACTION INVENTORY (MSI)	
GROUP CHARACTERISTICS			N	DSC	CCR
ADD	Clinical	F	5	$\bar{X}$= 69.4 S= 8.23	$\bar{X}$= 67.8 S= 4.55
ADD	Clinical	M	5	$\bar{X}$= 60.0 S= 15.62	$\bar{X}$= 56.4 S= 13.37
ADD	Nonclinical	F	10	$\bar{X}$= 65.1 S= 13.15	$\bar{X}$= 63.2 S= 15.63
ADD	Nonclinical	M	8	$\bar{X}$= 60.1 S= 16.46	$\bar{X}$= 57.1 S= 13.89
NON-ADD	Clinical	F	15	$\bar{X}$= 59.3 S= 13.63	$\bar{X}$= 56.6 S= 11.99
NON-ADD	Clinical	M	15	$\bar{X}$= 53.3 S= 9.82	$\bar{X}$= 53.1 S= 10.77
NON-ADD	Nonclinical	F	7	$\bar{X}$= 51.6 S= 4.50	$\bar{X}$= 43.9 S= 3.63
NON-ADD	Nonclinical	M	7	$\bar{X}$= 46.3 S= 5.77	$\bar{X}$= 46.3 S= 8.04

Table 1 continued

F=Female M=Male				CONNORS' PARENT RATING SCALE (CPRS)		
GROUP CHARACTERISTICS			N	CD	LP	PS
ADD	Clinical	F	5	$\bar{X}$= 78.6 S= 19.05	$\bar{X}$= 76.2 S= 14.96	$\bar{X}$= 57.6 S= 14.26
ADD	Clinical	M	5	$\bar{X}$= 67.6 S= 13.90	$\bar{X}$= 70.0 S= 7.11	$\bar{X}$= 53.6 S= 15.13
ADD	Nonclinical	F	10	$\bar{X}$= 74.6 S= 18.89	$\bar{X}$= 76.2 S= 12.53	$\bar{X}$= 57.0 S= 13.22
ADD	Nonclinical	M	8	$\bar{X}$= 74.0 S= 19.02	$\bar{X}$= 78.9 S= 10.41	$\bar{X}$= 62.8 S= 22.42
NON-ADD	Clinical	F	24	$\bar{X}$= 61.7 S= 18.49	$\bar{X}$= 56.8 S= 15.05	$\bar{X}$= 53.3 S= 9.34
NON-ADD	Clinical	M	24	$\bar{X}$= 61.0 S= 14.63	$\bar{X}$= 58.9 S= 17.21	$\bar{X}$= 56.6 S= 14.96
NON-ADD	Nonclinical	F	8	$\bar{X}$= 53.8 S= 7.42	$\bar{X}$= 56.4 S= 13.23	$\bar{X}$= 53.0 S= 12.59
NON-ADD	Nonclinical	M	8	$\bar{X}$= 50.5 S= 9.86	$\bar{X}$= 59.6 S= 8.83	$\bar{X}$= 46.9 S= 6.81

F=Female M=Male				CONNORS' PARENT RATING SCALE (CPRS)		
GROUP CHARACTERISTICS			N	IH	ANX	HYP
ADD	Clinical	F	5	$\bar{X}$= 66.2 S= 12.19	$\bar{X}$= 56.2 S= 7.43	$\bar{X}$= 81.8 S= 15.66
ADD	Clinical	M	5	$\bar{X}$= 64.8 S= 7.01	$\bar{X}$= 55.0 S= 10.70	$\bar{X}$= 76.0 S= 10.56
ADD	Nonclinical	F	10	$\bar{X}$= 70.9 S= 10.12	$\bar{X}$= 57.5 S= 10.33	$\bar{X}$= 76.4 S= 14.71
ADD	Nonclinical	M	8	$\bar{X}$= 69.8 S= 11.62	$\bar{X}$= 61.4 S= 16.42	$\bar{X}$= 79.9 S= 14.4
NON-ADD	Clinical	F	24	$\bar{X}$= 51.3 S= 13.53	$\bar{X}$= 59.5 S= 11.35	$\bar{X}$= 55.3 S= 13.84
NON-ADD	Clinical	M	24	$\bar{X}$= 54.4 S= 11.90	$\bar{X}$= 59.8 S= 12.0	$\bar{X}$= 56.4 S= 13.8
NON-ADD	Nonclinical	F	8	$\bar{X}$= 53.5 S= 9.59	$\bar{X}$= 49.0 S= 7.48	$\bar{X}$= 55.4 S= 11.17
NON-ADD	Nonclinical	M	8	$\bar{X}$= 52.9 S= 9.39	$\bar{X}$= 50.9 S= 7.61	$\bar{X}$= 53.6 S= 10.10

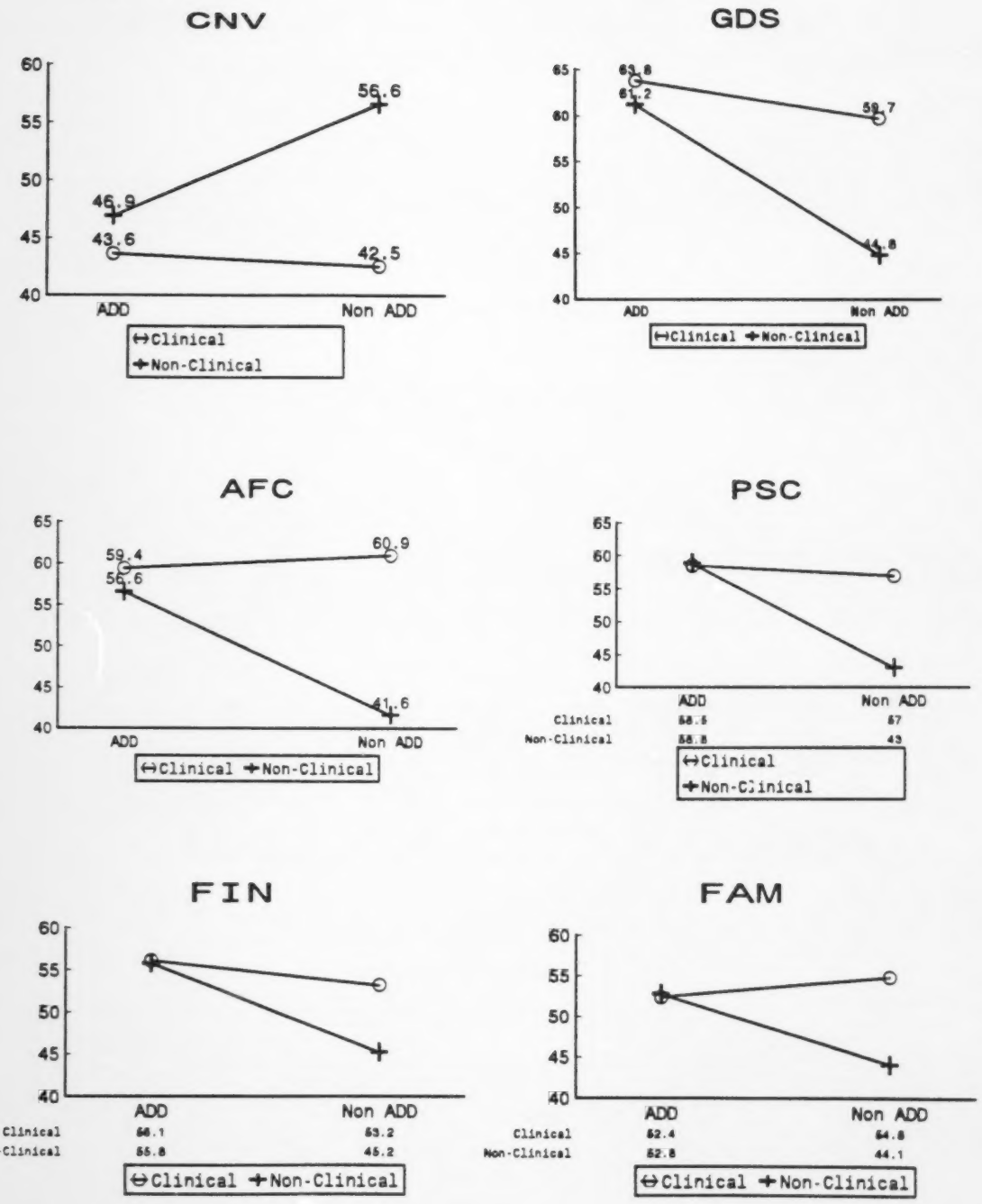
Table 1 continued

amount of affection and understanding by partners (t_{64}=5.39, $p < 0.01$), were more effective in resolving differences (t_{64}=4.96, $p < 0.01$), had fewer disagreements about finances (t_{64}=2.90, $p < 0.01$), and had a happier childhood (t_{64}=3.15, $p < 0.01$) than parents with hyperactive children (ADD non-clinical), clinical children (control clinical), or both (ADD clinical). These differences are graphically presented in Graph 1.

In addition, main ADD effects were found in the TTO, ROR, DSC, and CCR subscales. Compared to parents with non-hyperactive children, parents with hyperactive children reported greater dissatisfaction with the quality and quantity of leisure time together ($F_{1,64}$=4,83, $p < 0.05$), more traditional marital and sex roles ($F_{1,64}$=4.93, $p < 0.05$), greater dissatisfaction with children ($F_{1,64}$=13.40, $p < 0.01$), and greater conflict over childrearing practices ($F_{1,64}$=14.94, $p < 0.01$). This was true despite the sex and clinical status of the parents. It should be noted that except for the DSC subscale, where mothers indicated greater dissatisfaction with children than did fathers ($F_{1,64}$=4.83, $p < 0.05$), the gender of the parents showed no independent or interactive effect on the MSI subscales. In other words, husbands and wives were in agreement with each other with regard to their degree of marital satisfaction.

A series of ADD (hyperactive versus control) X CLINICAL (clinical cases versus non-clinical cases) X SEX (of

Graph 1



Comparison of Clinical Versus Non-Clinical for ADD and Non-ADD

parents) ANCOVAs with the children's ages as the covariate were conducted on the six CPRS subscales. The ANCOVA procedure serves two purposes. First, it identifies possible correlation between children's age and parental perception of behavioral abnormality. Secondly, by first 'partialling out' the children's ages as a potential influence on the parents' CPRS rating, the analysis can yield a clearer picture as to the effects of ADD, clinical status, and gender on parental perception of their children's behavioral abnormality.

Somewhat unexpectedly, results of the ANCOVAs showed that the children's ages were significantly related to only the CD subscale of the CPRS ($F_{1,83}=6.81$, $p < 0.05$), thus giving only limited support to the suggestion that parents' perception of their children's behavioral abnormality is affected by the age of the children (Barkley, 1990). This result suggests that age is not an important variable with relation to ADD children's behaviours as perceived by their parents over time, except for conduct disorder behaviours.

The main effects of ADD were found on three of the six CPRS subscales (CD, LP, & HYP). Compared to parents with non-hyperactive children, parents with hyperactive children rated their children as having greater conduct problems ($F_{1,83}=6.80$, $p < 0.05$), greater learning problems ($F_{1,83}=13.67$, $p < 0.01$), and as more hyperactive ($F_{1,83}=32.38$, $p < 0.01$). In addition, an ADD X CLINICAL

interaction was found in the Anxiety subscale of the CPRS ($F_{1,83}=5.21$, $p < 0.05$). Clinical parents rated their non-hyperactive children as more anxious than clinical parents with hyperactive children, but the reverse was true for non-clinical parents. The gender of the parents was not an important factor in determining the CPRS subscale scores.

To assess the relationship between marital satisfaction and the hyperactivity of the child, a correlational analysis of the MSI and the CPRS subscales was conducted. Results, given in Table 2, showed that the CD and the HYP subscales of the CPRS are significantly correlated with at least six of the MSI subscales. Thus, under-controlled behavioral symptoms seem related to parental marital discord in general (GDS) and to financial, role, and childrearing conflicts in particular.

According to Barkley (1981) and Taylor (1980), who hypothesized that destructive marital patterns and the hyperactivity of a child can influence each other, marital discord and hyperactivity of the child can progressively interact and intensify until it is considered pathological. To test this hypothesis, two sets of stepwise regression analyses were conducted. The first set of analyses treated each of the MSI subscale scores as the criterion variable and the CPRS subscale scores as the statistical predictor variables, and the second set treated each of the CPRS subscale scores as the criterion variable and the MSI

subscale scores as the statistical predictor variable. Results are given in Table 3.

As can be seen, hyperactivity (HYP), conduct disorder (CD), and psychosomatism (PS) constitute the major statistical predictors of marital satisfaction experienced by parents, significantly accounting for the variability of 9 of the 11 MSI subscales. In turn, parental role orientation (ROR), conflict over childrearing (CCR), conventionalization (CNV), global distress (GDS), affective communication (AFC), and disagreement about finances (FIN) serve as significant statistical predictors of the 5 CPRS subscales.

Of particular interest are the relationships between conduct disorder (CD) and parental disagreement about finances (FIN); between psychosomatism (PS) and parental affective communication (AFC); and between hyperactivity (HYP), parental conflict over childrearing practices (CCR), and parental role orientation (ROR). In these three sets of relationships, the variables involved are mutually statistically predictive of one another, suggesting that they may progressively interact with one another and become intensified.

Table 2

Correlation Coefficients Between the MSI and CPRS Subscales

	CD	LP	PS	IH	ANX	HYP
CNV	-0.2377	-0.0528	-0.2656	-0.1078	-0.2659	-0.1579
GDS	0.3558**	0.3182*	0.3498**	0.2624	0.1257	0.3650**
AFC	0.3327*	0.2085	0.3867**	0.1641	0.2324	0.2538
PSC	0.2231	0.1648	0.3057*	0.1698	0.1478	0.2219
TTO	0.2973*	0.2090	0.2374	0.2696*	0.1046	0.3214*
FIN	0.4771**	0.2248	0.2358	0.2984*	0.0032	0.3726**
SEX	0.2182	0.1936	0.1448	0.1038	0.0228	0.2459
ROR	-0.3240*	-0.3655**	-0.1618	-0.3645**	0.0050	-0.4840**
FAM	0.0289	-0.0192	0.1807	-0.0543	0.1578	-0.0360
DSC	0.3626**	0.3125*	0.1877	0.2696*	0.1486	0.4041**
CCR	0.3455**	0.3027*	0.1481	0.4067**	-0.0385	0.4414**

* $p < 0.01$

**$p < 0.001$

Table 3

Significant Results from Two Sets of Regression Analyses

Criterion variable	Significant predictor variables	Adjusted R^2
MSI subscales		
CNV	CD (B=-0.17;β=-0.28) ANX (B=-0.22;β=-0.25)	0.13 $p < 0.01$
GDS	HYP (B= 0.21;β= 0.27) PS (B= 0.26;β= 0.27)	0.17 $p < 0.001$
AFC	PS (B= 0.28;β= 0.29) CD (B= 0.17;β= 0.22)	0.15 $p < 0.01$
PSC	HYP (B= 0.18;β= 0.25) PS (B= 0.22;β= 0.25)	0.14 $p < 0.01$
TTO	HYP (B= 0.26;β= 0.39)	0.14 $p < 0.001$
FIN	CD (B= 0.28;β= 0.41)	0.16 $p < 0.001$
SEX	--	--
ROR	HYP (B=-0.39;β=-0.79) CD (B= 0.20;β= 0.41)	0.21 $p < 0.001$
FAM	--	--
DSC	HYP (B= 0.37;β= 0.47)	0.21 $p < 0.001$
CCR	HYP (B= 0.39;β= 0.50)	0.24 $p < 0.001$
CPRS subscales		
CD	FIN (B= 0.73;β= 0.48)	0.22 $p < 0.001$
LP	ROR (B=-0.62;β=-0.32) GDS (B= 0.70;β= 0.52) CNV (B= 0.61;β= 0.36)	0.24 $p < 0.001$
PS	AFC (B=-0.43;β= 0.39)	0.14 $p < 0.001$
IH	CCR (B= 0.37;β= 0.34) ROR (B=-0.45;β=-0.28)	0.22 $p < 0.001$
ANX	CNV (-B=0.32;β=-0.27)	0.06 $p < 0.01$
HYP	ROR (B=-0.80;β=-0.40) CCR (B= 0.46;β= 0.34)	0.33 $p < 0.001$

CHAPTER V

Discussion

Introduction. This exploratory investigation into marital satisfaction and parents with children diagnosed as ADD or non-ADD presented interesting correlations and accounts of variability through an ANOVA analysis. The strength of this investigation was in the area of looking at questionnaires from both parents as compared to a single parent, usually mothers. In this regard, it appears that the data is very similar for both parents and, therefore, this study adds support for the validity of the results of past studies which depended only upon mothers responses.

Another strength of this study comes from the use of the MSI (Snyder, 1979, 1983). The MSI is a thorough and probing tool that appears useful at both the research and clinical levels when assessing marital dissatisfaction (Snyder, 1983, 1985). Many research studies to date have used only the Locke-Wallace Marital Adjustment Test (MAT) (Locke & Wallace, 1959), when assessing marital satisfaction. In clinical settings, the MAT has been used to screen for marital difficulties in the families of ADD children (Barkley, 1990).

By using the MSI and CPRS subscales as criterion variables, this study was able to show that marital discord and the hyperactivity of the child can progressively interact and intensify. This interaction supports the

potential use of family therapy for couples when ADD children are involved, since family therapy would most likely be more efficient and effective for addressing the interactions between marital difficulties and behaviours associated with ADD.

A weakness of this study was the limited number of cases of all groups, which prohibited the use of multivariate analysis. The use of 2 X 2 X 2 ANOVA with all MSI subscales as dependent variables would require at least 11 subjects per cell. In spite of efforts to increase the sample size, problems occurred where good intentions were not followed through by obtaining the numbers of patients required to fit the various groups (three out of six referral sources that said they would contribute referrals actually carried through with referring some clients) or by lack of completed questionnaires by some participants. Therefore, the multivariate multiple regression analysis originally planned could not be carried out. The ANOVA analysis was possible. This analysis revealed interesting interactions between the subscales.

Discussion of Hypotheses

Hypothesis Number 1. Parents of ADD children demonstrate (significantly) higher levels of distress in affective communication, problem solving communication, and other forms of pathological interaction when compared to the

normative data base utilized in the MSI and when compared to the Non-ADD Non-Clinical families.

The statistical analysis supported this hypothesis. Results showed significant ADD X Clinical interactions on the CNV, GDS, AFC, PSC, FIN, and FAM, as reported in the result section. Planned comparisons of these interactions further revealed that parents with normal children described their relationship in a more positive manner, were generally more content with their marriages, were more satisfied with the amount of affection and understanding by partners, were more effective in resolving differences, had fewer disagreements about finances, and had a happier childhood than parents with hyperactive children, (ADD Non-clinical), clinical children (control clinical), or both (ADD clinical).

Hypothesis Number 2. Parents of ADD children demonstrate higher levels of dissatisfaction with their children and higher levels of conflict over childrearing practices when compared with parents of Non-ADD children.

The DSC subscale showed that mothers indicated greater dissatisfaction with children than did fathers. In addition, positive and significant correlations at the $p < 0.001$ level were found between DSC (dissatisfaction with their children) and CD (Conduct Disorder), IH (Impulsive Hyperactive), and HYP (Hyperactivity)

Hypothesis Number 3. There are significant differences as to how individual parents rate their children on problem behaviours.

The DSC subscale showed that mothers indicated greater dissatisfaction with children than did fathers. This was the only subscale on which there was a significant difference between individual parents rating of their children.

Hypothesis Number 4. Marital discord and hyperactivity problems of the child are interdependent and statistically predictable from each other.

To assess the relationship between marital satisfaction and the hyperactivity of the child, a correlational analysis of the MSI and the CPRS subscales was conducted. Results showed that the CD and the HYP subscales of the CPRS are significantly correlated with at least six of the MSI subscales. Thus, under-controlled behavioral symptoms seem to be related to parental marital discord in general (GDS) and to financial, role, and childrearing conflicts in particular. The above hypothesis is supported.
Further, two sets of stepwise regression analyses were conducted. (See Results Section). Results supported that hyperactivity (HYP), conduct disorder (CD), and psychosomatism (PS) constitute the major statistical predictors of marital dissatisfaction (satisfaction)

experienced by parents, significantly accounting for the variability of 9 of the 11 MSI subscales.

Parents with Non-ADD Versus ADD Children. Parents with normal children indicated through their MSI scores that their relationship was more positive than parents who had children diagnosed ADD and parents who were seeing a therapist for marital reasons. This raises interesting possibilities as to the interrelationship between marital discord and ADD. Parents with normal children will derive satisfaction from their marital/parental experience. In contrast, when children present behaviour problems, this often does generate stress in the marital/parental subsystems. Conversely, children may benefit from having a home which provides marital contentment. In conclusion, the parental group with normal children were generally more content with marriage than the ADD parents. Further investigations could be carried out which looks at possible ways to give more therapy and education to ADD families. Family support groups for ADD families, multiple-family therapy groups for ADD families, and family therapy could address both behavioral management, education, and family therapy issues, while providing a framework in which parents might begin to connect how their marital issues interact with their child's issues. Cognitive therapy principles could be used in the initial approach to reframe some parents' previous outlooks about ADD children or their

reluctance to deal with broader issues (Barkley, 1990).

Parents with normal children were more satisfied with the amount of affection and understanding by partners, more effective in resolving differences, had fewer disagreements about finances and had happier childhoods than parents with ADD children. In terms of the negative influence of ADD children, the following ADD effects showed stress according to the MSI: Time Together (TTO), Role Orientation (ROR), Dissatisfaction with Children (DSC), and Childrearing Conflicts (CCR). ADD parents reported greater dissatisfaction than Non-ADD in the above subscale categories.

Discussion of Sex Differences on the MSI Results. What is particularly interesting is that Dissatisfaction with Children (DSC) was the only subscale which indicated a difference according to the gender of the parents. Mothers reported greater dissatisfaction with children than fathers. This result is congruent with Minuchin et al.'s (1978) finding that a commonly observed pattern in families with an identified patient was that the mothers maintained an overly close relationship with the child while the fathers maintained a distant relationship with the child. Mothers are often the caretakers and demand more tasks from the ADD child because of the time spent with the child. The mother may simply be aware of more of the problems and/or may feel more dissatisfaction arising from the exposure over time to

more frustrating situations than the father. If such paternal/maternal difficulty in dissatisfaction with children can be replicated, one might investigate further what kind of expectations mothers have of children in comparison to those of fathers. As well what expectations do mothers have of themselves in the role of an influencing parent? Desired outcomes of behaviours may be projected onto their children in a different way than fathers' projections, if fathers expectations of themselves as parents is less involved or distant. Ten of the 11 MSI subscales showed that husbands and wives are in agreement with each other concerning their degree of marital satisfaction. This is not always clear to clinicians who often listen to fragmented reports and see a less global picture than the MSI scales present. The MSI information, collected during an assessment of the couple's marriage, may give a more overall picture from which the therapist can construct their interventions.

Parents' Rating of Hyperactivity. One of the research questions addressed was, "Are there significant differences as to how individual parents rate their child on problem behaviour measured by the Conners' Parent Rating Scale?" The data on the CPRS did not show a significant difference between parents in the rating of problem behaviour. This lack of significant difference suggests that either parent could fill out the CPRS, with no significant benefit in

having the partners do so. This result has importance to research data validity, since often only one parent is available to contribute information.

Parents with hyperactive children reported their children as having significantly more conduct problems, learning problems, impulsive behaviour, and hyperactive behaviour than parents with Non-ADD children. Therefore some hyperactive (ADD) children appear to have similar behaviours to those children studied in conduct disorder research, as indicated by the subscale CD. The results of this study suggest that although the degree of under-controlled behaviour (as found in Conduct Disorders) may overlap with hyperactive children, there is more likely to be the above-mentioned four factors in hyperactive children. ADD is a cluster of symptoms (Barkley, 1990), further supported by this research data. Childhood aggression may be a marker variable for three parent/family variables (child management methods, parental psychopathology, and marital distress) which contribute more strongly to negative outcomes over time than just aggressive childhood behaviour itself (Barkley, 1990). Intervening strictly at the level of childhood aggression, therefore, would probably not produce as much impact on later adolescent outcome, because such interventions fail to address directly the parental disturbances, such as marital difficulties, that predispose children toward these later negative outcomes (Barkley,

1990). Paternal aggression and anti-social behaviour (both of which are associated with marital difficulties) are associated with later CD and anti-social acts in these children (Lahey et al., 1988). Barkley (1990) notes that paternal aggression and anti-social behaviour besides maternal depression and marital discord are directly associated with early aggression in ADD children.

Interestingly, and reported in the results, an ADD X Clinical interaction was found for the measure in the CPRS. Clinical parents rated their non-hyperactive children as more anxious than clinical parents with hyperactive children, but the reverse was true for non-clinical parents. Clinical parents with children who have non-ADD children may also be feeling anxious, but when they have ADD children they do not seem to focus on anxiety when describing their ADD children. Non-clinical parents with hyperactive children do focus on anxiety as well as other factors when describing their ADD children but do not focus on anxiety when describing their normal children. Having a label of ADD or hyperactivity or having other behaviours more prominent with these children, may lower the perception of anxiety as related to clinical ADD children.

Discussion of MSI Validity Subscale. The parents of ADD children show less conventionalization than parents of normal children. This result was previously suspected as this researcher had originally wondered if non-clinical

cases would have more conventionalization or a desire to see things "normally." Although the Non-Clinical group was more conventional, there was some question as to the honesty of their responses, since the conventionalization subscale is also the lie/validity subscale where one can determine how individuals may have distorted their situations to look more normal and acceptable in society's terms. It is clear (see Graph 1) that there are more CNVs in the Non-ADD cases within the Non-Clinical cases than in the Clinical cases and in the ADD children of the Non-Clinical cases and Clinical cases. That is to say, conventionalization is greater in the Non-ADD Clinical, meaning that perhaps the non-clinical parents with normal children are happier couples. It could also mean that these parents have a tendency to distort the appraisal of their marriage in a socially desirable direction. The items reflect denial of minor, commonly occurring marital difficulties and describing the relationship in an unrealistically positive manner. Thus the Clinical cases seemed to report lower on the CNV whether they had ADD children or not. Non-Clinical cases with Non-ADD tended to be more in denial of minor, commonly occurring marital difficulties than the others. The Non-Clinical ADD group appears to have more realistic reporting of their marriage than the Non-Clinical Non-ADD group.

Determine Relationship of Marital Discord of Parents to

Children Identified as ADD. As the result section shows, parental disagreement about finances is a statistical predictor of conduct disorder. The under-controlled behaviour issues overlap with socio-economic stressors which are affecting the family. Both areas, financial disagreements and under-controlled behavioral symptoms, can be addressed simultaneously in therapy. This may call for constructing new frames of references for these families (Keeney & Ross, 1985) which would help the families appreciate how these two stressors/symptoms may accentuate each other. Family therapy could possibly focus on addressing both of these factors simultaneously for cumulative beneficial results.

Results also show that parental affective communication can statistically predict psychosomatism. Family interventions that address the avoidance, undermining of, or other problems concerned with affective expression may help the family with this affective aspect of the MSI and psychosomatic problems of the CPRS, thus diminishing their intensifying nature.

Finally, HYP could be statistically predicted by CCR and ROR. Therefore, these two variables related to ADD appear to interact with parental conflict over childrearing practices and parental role or orientation.

Marital relations may affect hyperactive symptoms in

children. Again, the goal in the family therapy could be to confront the factors with an awareness of the larger picture which sees more of the elephant than its separate parts.

The results of the present study indicate that some patterns of interaction between parents and patterns of interaction between the child and parents do demonstrate relevance to the pathological reactions of the ADD child. Hyperactivity (HYP), conduct disorder (CD), and psychosomatism (PS) form the major statistical predictors of marital satisfaction experienced by parents, significantly accounting for the variability of 9 of the 11 MSI subscales. The ADD factors are major issues needing to be addressed along with the marital conflicts within a family therapy context.

There are three sets of relationships that are mutually statistically predictive of one another, suggesting that they may progressively interact with one another and become intensified: 1) the relationship between conduct disorder and parental disagreement about finances, 2) the relationship between somatisism and parental affective communication, 3) the relationship between hyperactivity and parental conflict over childrearing practises and parental role orientation. It is interesting to question what the cumulative effect of the relationship between conduct disorder (CD) and parental disagreement about finances (FIN) could be in the marriage and for the children. If a child

hears the parents arguing over money, does the child feel that he/she should steal money/objects for the family, or perhaps feel bad about being a financial burden to the family, or receive more negative comments about his behaviour, in part related to the need of the parents to distract themselves from their own failure to provide?

One could argue the possibilities that arise in the culminating relationship between psychosomatism (PS) and parental affective communication (AFC). For example, feelings are often avoided or denied in psychosomatic families (Minuchin & Fishman, 1981). A recent study supported the familial association with ADD and major affective disorders (Biederman, Faraone, Keenan, & Tsuang, 1991). One can understand that affective needs are not as satisfied when there is less expression of feelings or experience of desired support between spouses.

One could hypothesize about the difficulties exacerbated by the three factors which form together in the relationship between hyperactivity (HYP), parental conflict over childrearing practices (CCR), and parental role orientation (ROR). When parents have increased conflict about how to raise their children and what their individual roles are as parents, children have been known to divide and conquer their parents easily, or they can react to the parents' confusions by becoming even more hyper. Often, hyperactive behaviour can be a means to protect the parents

(for example, from parental anxiety), but protective behaviour in the form of hyper behaviour can also exacerbate the situation.

How do ADD Families Compare with the Psychosomatic Families?

Theory predicts that the psychosomatic family will be more conventional and have more rigid constructs for the family roles. ADD families resemble psychosomatic families as looked at by Minuchin & Fishman (1981). Psychosomatic families in structural family therapy often appear with rigid constructs, and the goal of the family therapy is to create more flexible possibilities (Minuchin & Fishman, 1981). These findings support the use of family therapy, similar in type and theoretical constructs to that used with psychosomatic families. There are family therapeutic issues to be dealt with besides a possible need for medication. Systemic theories of psychotherapy advocate a position that children identified as 'patients' are members of a larger dysfunctional system which is responsible for the development and maintenance of the presenting problem. The results of this research support the theory that a child could be viewed as both a stimulus activating responses within the system and an equally important responder to the marriage. Transactional patterns could connect the problem behaviour of one person with the behaviour of other people (Keeney & Ross, 1985). From this theoretical position, the clinical implication broadens from a treatment approach

involving the child in isolation to focusing on the family system and other equally significant systems in which the child lives and functions (e.g., school, community, and church).

Limitations of Training Parents when no Family Therapy is Provided. Training parents where marital discord is involved may not be adequate or efficient in helping the ADD child. Dadds et al. (1987b) and Sanders, Dadds, and Bor (1989) showed that raters could distinguish those families with and without marital discord in terms of parent and child behaviours as a function of parent training in child management. This work mainly involved conduct-disordered children and their families, concentrating especially on depressed mothers. Barkley (1981) and Taylor (1980) have hypothesized that destructive marital patterns and the hyperactivity of a child can influence each other and that any therapeutic intervention should address both these issues if any long-term benefit is expected. For both ADD families and CD families, behavioral management training (Horn, Iolongo, Greenberg, Packard, & Smith-Winberry, 1990) may prove short-lived if family therapy is not included.

Identify the Nature of Interaction and Conflict Resolution Strategies Employed by the Parents in Their Marriage. Parents with Non-Clinical Non-ADD children were more satisfied with the amount of affection and understanding by partners, more effective in resolving differences, had fewer

disagreements about finances, and had happier childhoods than parents with ADD children. In terms of family therapy, these factors may need to be addressed for Clinical ADD and Non-ADD, as well as Non-Clinical ADD, cases. Certainly, intimacy is enhanced when affection and understanding increase between the couple. Skills such as problem solving may need to be taught to some couples. Financial disagreements often need to be made more explicit, practical and sensitive to affective needs.

What are the Implications of the Marriage to the ADD or Non-ADD Children? One might question how the ADD families remain symptomatic and how members continue to "organize" their behaviour around the identified ADD patient (IP). It is this structural organization which will function in such a way as to maintain the IP as the "problem." What is the strength of the factors identified in this study in terms of their ability to maintain the problem? On five subscales (See Graph 1) (Global Distress (GDS), Affective Communication (AFC), Problem Solving Communication (PSC), Disagreements about Finances (FIN) and Family History and Distress (FAM)), there were high scores for the ADD children of both the Clinical and the Non-Clinical groups as well as the Non-Clinical ADD but low scores for non-ADD Non-Clinical. Looking at these subscales, the Clinical groups with ADD and Non-ADD appear to be similar to the Non-Clinical group with ADD. One might question why the

couples alone would be the treatment of choice in these families, since the children and the couples are similar in profile to the Clinical groups seeking family therapy. This researcher concludes that more efficient therapy for couples in treatment with ADD children could benefit from both family therapy and couples therapy.

One might question what brings the clinical ADD children into therapy and not the non-clinical ADD children. This may relate to Minuchin's (1974) idea about the ways in which the families organize themselves around an Identified Patient (IP) and the ways in which an IP is able to organize family members. For example, what purpose is served by treating the couple and ignoring the child with ADD? Further research could be directed at these situations. Perhaps one group could have only couple therapy when ADD children were in the family, and another group could have family therapy. Results of the effectiveness of the therapy could be assessed. It might be hypothesized that there would be more improvement in the couple's MSI when they participated in family therapy with the ADD child and their whole family including the child's siblings. This hypothesis relates to extensive research. Emery (1982) concluded that marital unhappiness and conflict are related to behaviour problems in children referred to clinics for treatment. He found a particularly strong relationship between marital discord and "uncontrolled" behaviour in

children, especially boys. Mash and Johnston (1982) found that parents reported four times more conflict between the hyperactive child and siblings than the matched controls. The behaviour of siblings which may have implications for marital discord has been reported by Brody, Stoneman, and Burke (1987).

The classical study by Minuchin, Rosman, and Baker (1978) demonstrated how emotional arousal may be maintained between parents and the child. How can the therapist confront the emotions surrounding the maintenance of the marital conflict and move towards solutions, especially when this emotional arousal is affecting the child? From the perspective of the ADD compounding problem, how can the focus be more appropriately directed to the child where this would be helpful to the child's emotional well-being, so that the child can be less enmeshed with the parental conflict and perhaps evoke less stress potential for the parents attempting to deal with the child's behaviours? Minuchin and Fishman, (1981) recommend having more flexibility in the family's transactions and, therefore, attempt to construct an acceptance of this new framework for the family.

Appropriateness of the MSI and CPRS as Assessment Tools. The present investigation chose the Marital Satisfaction Inventory and the Conners' Parent Rating Scale because they have been found reliable, valid, and useful assessment tools

for assessing marital satisfaction and ADD, giving a detailed picture of the family situation. They were found to have these qualities in this research too.

Barkley (1990) stresses the need for cost-effective assessment for these children and their families, especially where their coverage may be limited: "Using up a child's entire annual mandated insurance benefits for mental health within a single assessment will preclude that child from readily obtaining the mental health treatments that may be needed subsequently" (p. 353). The MSI and Conners' Parent Rating Scales are cost-effective tools. A few of the parents who initially agreed to fill out the MSI forms did not want to do so when they read some questions that explicitly asked about their sexual life. The MSI asks probing questions that the Locke-Wallace does not address. The Locke-Wallace is less invasive or direct about some marital issues and therefore may appeal to certain parents, who do not see the relevance of their marriage to the ADD child's well-being or diagnosis. For more detailed research and for marital counselling, this researcher still prefers the MSI to the Locke-Wallace, except in the clinical cases where cooperation would be more likely because of the clients' preference to have less disclosure. There is often more co-operation in filling out questionnaires in a clinical situation versus a research context, partly because of the rapport between the therapist and the clients and

partially because of the applied use of the questionnaires in the therapy itself.

There is also the problem of dual diagnoses of ADD and Conduct Disorder. Barkley (1990) warns:

> "Comorbidity" means that children with one disorder have a high likelihood of having a second. Some children with one disorder have a high likelihood of having a second . . . Many studies of this issue have not taken care to choose subjects who have only one of these disorders to compare against those who have "pure" cases of the other disorders. As a result, they compare mixed cases of ADD with mixed cases of other disorders; this greatly weakens the likelihood that differences among the groups will merge. (pp. 52-53)

The present investigation included only those with singular diagnoses of ADD, although this factor made the collection of the data more difficult. Biederman, Newcorn, and Sprich (1991) reported that subgroups of children with attention deficit disorder might be delineated on the basis of the disorder's comorbidity with other disorders. They suggest that these subgroups may have differing risk factors, clinical courses, and pharmacological responses. Thus, their proper identification may lead to refinements and preventative and treatment strategies. Investigations of these issues should more clearly show the etiology and outcome of ADD.

Barkley (1990) also discusses the problems with correlation of symptoms in the syndrome of ADD. A disorder may not show uniform variation but may still be clinically useful as a syndrome (Rutter, 1977, 1989). It is argued that children in treatment do not show uniform symptoms but

still show a relatively similar course and outcome, their symptoms statistically predict differential responses to certain treatments relative to other disorders, or they tend to share a common etiology or set of etiologies. It may still be valuable to consider children with such characteristics as having a syndrome of ADD (Barkley, 1990; Douglas, 1983; Rutter, 1989; and Taylor, 1986).

Finally, this research supports the use of the model of family observation interviews, where the family is given a task to solve while the therapists/researchers observe their patterns of interactions. This type of research is similar to that employed with anorexic, asthmatic, and diabetic families (Minuchin, 1978). It is important to have the whole family present in the interview, as parents and siblings have also been seen as important in the assessment and treatment of ADD families (Barkley, 1990). There are several advantages in using the psychosomatic family model for treatment of ADD children and parents.

Constructivism in Relation to ADD Families. Keeney and Ross (1985) are particularly interested in constructivism, that is, the perspective that emphasizes the observer's participation in the construction of what is observed. For example, Keeney and Ross suggest that what a therapist reports about a family says more about the therapist's constructions than about the family (the observer and the observed). Von Foerster (1987) calls for change from

emphasizing the observed system to emphasizing the observing system. This constructivist's position emphasizes the context of the therapy as including formal understanding and practical strategy. In the former, the primary purpose is to achieve formal theoretical understanding. In the second, the primary purpose is to determine practical advice and strategies for organizing one's action in conducting therapy (i.e. one's behaviours). One might ask, what are the formal theoretical understandings that can be derived from viewing marital conflict in relation to ADD children? What are the practical strategies supported from the results of this study? A shift is necessary for those therapists who assess and treat the identified patient without considering the family context, especially marital discord. From the point of view of understanding the context of the symptoms of ADD within the family, the issues of change and stability of the system also need to be addressed. From the view of purpose of a practical strategy, prescribing the symptoms may address stability while at the same time allowing the family to notice change.

All systemic therapies involve semantic (language) meaning coupled to the political (socio-cultural) patterns that organize social interaction. Systemic family therapists according to Keeney and Ross (1985):

> must reinstate the value of semantics by underscoring its interrelationship with political frames. The various systemic family therapies follow patterns of interwoven political and semantic frames and, thereby,

construct therapeutic realities" (p.21).

Keeney and Ross construct political frames where the child's behaviour functions to "calibrate" parental interactions.

The therapeutic implications are that family therapy could provide a context wherein the family could alter the way they change in order to maintain their stable organization. In the family context of a symptomatic child and calibrating parental interaction, any proposal to change symptomatic experiences implies a request to change the way in which the parents maintain stability in the relationship. "In family therapy, requests to unilaterally change one member's symptomatic experience underscores the distinction between who is troubled, sick or problematic and who is not. From another perspective, the family can be seen as co-operating in such a way that each member contributes to stability of the relationship's structure" (p.18). Keeney and Ross (1985) refer to recursive complementarity which points to how the different sides of a relationship participate as complementary connections and yet remain distinct. This view underscores each family member's contribution to stabilizing the whole family. Semantics and political aspects feed on each other; that is to say, parental attribution of their child's behaviours influences their actions and reactions. This idea is supported by the interconnections of the MSI and the Conners' Parent Rating Scale variables as discussed in the results section.

According to Barkley (1990), contingency management techniques may be sufficient to cause desired changes in the homes of some ADD children. However, a significant portion of the ADD population have parents experiencing depression, anxiety, health problems, and other types of personal distress (Barkley, 1990). Marital tensions, financial strains, and other psychosocial stressors may need to be addressed. Unfortunately, parents must direct most of their time and energy to these difficulties, which takes time away from their parenting responsibilities and makes training management less effective. Research findings suggest modest to moderate associations between ADD and various dimensions of psychosocial and familial factors. However, in the families of children who have both ADD with hyperactivity and Conduct Disorder, there are considerably higher rates of depression, alcoholism, conduct problems, and hyperactivity among first-degree relatives (Barkley, 1990; Biederman et al., 1987; Cantwell, 1975; Lahey et al., 1988). Jouriles, Bourge, and Farris (1991), found that parents' reports of marital adjustment and child conduct problems are significantly stronger in families of clinic referred children than with families of non-clinic children and in families of lower socio-economic (SES) than with families of higher SES.

There are many potential distractions which keep

parents from addressing the ADD child's needs. Marital tensions, financial strains, and other psychological stressors may exist. To the extent that these circumstances are present, parents must direct much of their time and energy to coping with these difficulties. In the process of doing so, parental attention is necessarily diverted away from parenting responsibilities. Under these conditions, efforts to teach parents specialized contingency management techniques often fall short. Consequently individual, marital, and/or family counselling services must be provided either before or during ongoing parent training efforts.

Potential Exacerbation of the Problem. The question arises, "Do the dynamics of the family exacerbate the problems of the ADD child?" To look at this further, it is useful to use the model of the psychosomatic family as a parallel or analogy to the ADD families. Psychosomatic families have higher rates of conflict and less self-disclosure and triangulation problems (Minuchin & Fishman, 1981) than control families. The structural organization of these families emphasizes the child's symptoms sometimes as a way to distract from the parental conflict.

The major issue with psychosomatic families stems from the outlook that the family is organized as a structural unit. One must look further at these structural units to investigate how the problem could be exacerbated or not. For example, as some of these ADD children get older, they

have more conduct disorder problems. It is unclear whether they have more learning problems, but it is clear that learning is cumulative and that if basic skills are not learned, it is more likely that other skills will be hampered later (Barkley, 1990). In a twin study of hyperactivity (Goodman & Stevenson, 1989) children with pervasive hyperactivity had more attentional and educational problems than non-hyperactive children who were pervasively antisocial. By attending to the ADD children's problems earlier through a comprehensive approach including family therapy, there could be opportunities to arrest further potential problems. It is clear in the literature, based on the number of hyperactive and learning problem children within juvenile homes, that medication alone is a limited answer for the kinds of problems faced by these children. Physicians may need to refer to counsellors concerning ADD children taking medication, that is compliance and acceptance of the need for medication (Barkley, 1990; Rapport & Kelly, 1991; Webster-Stratton, 1990; Whalen, Henker, Hinshaw, Heller, & Huber-Dressler, 1991). For example, the child may resist taking medication because of the need to be seen as normal. One problem of psychosomatic families is that they tend to want to identify a patient within the family as opposed to having the family work on family issues. Management of medication need not feed into this kind of labelling or IP syndromes. A psychologist

could help parents as well as the child from getting entangled in a negative framing around medication.

Crucial Aspects of Initial Assessment of ADD Families. While the investigation of these factors can provide important information for both the treatment and prognosis of the child with ADD, care must be taken how the assessment is presented and conducted. Because the child is the identified patient referred for assessment, parents may be somewhat reluctant to provide information about an area that they believe has no bearing on the child or one that may be particularly embarrassing for them (e.g. past history of LD, current marital difficulties). Explaining the reasons behind the rating scales or interview questions and their applicability to the child's outcome, as well as providing assurance of confidentiality, can support family members in sharing this valuable information (Barkley, 1990). Inaccurate self-perceptions may come into play for parents of ADD children. For example, when told of their child's ADD diagnosis, the parents may automatically assume that they are in some way directly responsible. Or as sometimes happens, one spouse may blame the other for the child's difficulties. In either case, such assumptions about the etiology of ADD are often accompanied by strong feelings of parental guilt (Barkley, 1990).

Practical Issues for Choice of Treatment. While many clinicians endorse a "family systems" view in their clinical

practice, these views are notorious for being grounded solely in theories that are rarely subjected to scientific analysis or incorporated into practice. Holding such views, a number of clinicians ignore the overwhelming evidence of strong reciprocal effects in these family interactions: they focus primarily if not exclusively on the impact of parental behaviour on the children, while missing the substantial effects produced by these children on their parents and family life in general. Barkley (1990) warns about the inherently one-sided approaches that are unfair, untrue, and perhaps even damaging to the adjustment of these children if interventions are founded upon them. Barkley (1990) adds to the larger picture by stating:

> It is easy for professionals like us to state that the adequate assessment of the ADD child must be multi-method and rely on multiple sources of information, and that treatment must be a combination of psychological, educational, and medical interventions. However, in rural areas, such as on Native American reservations in the Southwest, it may be almost impossible to employ multiple methods of assessment across multiple sources when one is the only physician or school psychologist available to provide services to ADD children (Barkley, 1990, p. 218).

Barkley has shifted his view of ADD children in the direction of motivational disorder. This allows him the theoretical rationale for teaching parents specialized contingency management, which may be used to motivate ADD children to do things that they are unwilling to do otherwise.

Future Research

One area where research is needed is in the comparison of those families that do not appear to have ADD children with long-standing problems that develop into conduct disorders, greater learning difficulties, and dysfunctioning hyperactivity with those families that do demonstrate these problems. Alexander (1973) and Alexander and Parsons (1973) studied families with children who were status offenders, that is children and adolescents who, if they had been over eighteen, would not have been charged for these offenses such as truancy. They compared these children to other families in similar circumstances where the children were functioning within the normal range of behaviour functioning in the school environment and appeared to have fewer difficulties within their family settings. In therapy, he attempted to make the status children's families resemble the functioning of coping families (Alexander, Barton, Schiavo, & Parson, 1976; Alexander, Barton, Waldron, & Mass, 1983). These studies developed a model family therapy for this particular population which succeeded in normalizing behaviours in the family in a functional manner. These families might not look like model families, but parents managed their children's behaviour and their functioning in a way that did not continue to escalate the problems and draw attention to delinquent acts. This approach to research could get the focus away from problems and into

looking at a broader context which in turn might provide useful solutions to family issues. Further research into ADD families could follow this model and assess whether the normative approach proves useful. Family therapy would need to be the focus of the future. Researchers would need a baseline of behaviours in ADD families where problems and marital conflict did not constantly test at a high rate of distress. Webster-Stratton and Hammond, (1990) studied statistical predictors of treatment outcome in parent training for families with conduct problem children and found the following:

For children, the best predictor of the amount of observed child deviance on the home observations was single-parent status or marital adjustment. For families who had a father present, the amount of negative life stress experienced by the family in the year since treatment was completed, was the best predictor of child deviance. (p. 319)

Future research could investigate into the poor outcome of ADD children by differentiating the diagnoses to include a CD group and a mixed ADD/CD (Lilienfeld & Waldman, 1990). The independence of hyperactivity from conduct disorder was statistically demonstrated by Blouin, Conners, Seidel and Blouin (1989). As diagnoses are differentiated more clearly, research will be able to look at long term outcomes of treatments more precisely.

Conclusion

In conclusion, this study contributes to a further understanding of ADD children, their parents, and the issue of family therapy. The discussion reviewed some practical issues involved in effectively assessing and treating ADD children. Clearly marital discord issues and ADD symptoms need to be considered from the beginning of therapy whenever possible. The MSI and CPRS subscales are useful tools for assessing the larger picture.

REFERENCES

Alexander, J. F. (1973). Defensive and supportive communications in normal and deviant families. Journal of Consulting and Clinical Psychology, 40, 223-231.

Alexander, J. F., & Parsons, B. V. (1973). Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. Journal of Abnormal Psychology, 31, 219-223.

Alexander, J. F., Barton, C., Schiavo, R. S., & Parsons, B. V. (1976). Systems behavioral intervention with families of delinquents: Therapists characteristics, family behaviour, and outcome. Journal of Consulting and Clinical Psychology, 44, 656-664.

Alexander, J. F., Barton, C., Waldron, H., & Mass, C. H. (1983). Beyond the technology of family therapy: The anatomy of intervention model. In K.D. Craig & R. J. McMahon (Eds.), Advances in clinical behaviour therapy. New York: Brunner/Mazel.

American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: American Psychiatric Association.

August, G. J., Stewart, M. A. & Holmes, C. S. (1983). A four-year follow-up of hyperactive boys with and without conduct disorder. British Journal of Psychiatry, 143, 192-198.

Barkley, R. A. (1981). Hyperactive children : A handbook for diagnosis and treatment. New York: Guilford.

Barkley, R. A. (1989, November). Attention deficit hyperactivity disorder in children and adolescence. Workshop presented at the University of Alberta, Edmonton, AB.

Barkley, R. A. (1990). Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment. New York: Guilford

Biederman, J., Newcorn, J. & Sprich, S. (1991). Comorbidity of attention deficit hyperactivity disorder with conduct, depressive, anxiety, and other disorders. American Journal of Psychiatry, 148, 564-577.

Biederman, J., Faraone, S. V., Keenan, K., & Tsuang, M. T. (1991). Evidence of familial association between attention deficit disorder and major affective disorders. Archives of General Psychiatry, 48, 633-642.

Biederman, J., Faraone, S. V., Keenan, K., Steingard, R., & Tsuang, M. T. (1991). Familial association between attention deficit disorder and anxiety disorders. American Journal of Psychiatry, 148, 251-256.

Biederman, J., Munir, K., Knee, D., Armentano, M., Autor, S., Waternaux, C., & Tsuang, M. (1987). High rate of affective disorders in probands with attention deficit disorders and their relatives: A controlled family study. American Journal of Psychiatry, 144, 330-333.

Blouin, A. G., Conners, C. K, Seidel, W. T., & Blouin, J. (May, 1989). The independence of hyperactivity from conduct disorder: Methodological considerations. Canadian Journal of Psychiatry, 34, 279-282.

Brody, G. H., Stoneman, Z., & Burke, M. (1987). Family system and individual child correlates of sibling behaviour. American Journal of Ortho Psychiatry, 57, 561-569.

Campbell, S. B. (1985). Hyperactivity in preschoolers: Correlates and prognostic implications. Clinical Psychology Review, 5, 405-428.

Cantwell, D. (1975). The hyperactive child: Diagnosis, management, current research. New York: Spectrum.

Conners, C. K. (1989). Manual for Conners' Parent Rating Scales. Toronto: Multi-Health Systems.

Dadds, M. R., Schwartz, S., & Sanders, M. R. (1987b) Marital discord and treatment outcome in behavioural treatment of child conduct disorders. Journal of Consulting and Clinical Psychology, 55, 396-403.

Dadds, M. R., Sanders, M. R., Behrens, B. C., & James. J. E. (1987a). Marital discord and child behaviour problems: A description of family interactions during treatment. Journal of Clinical Child Psychology, 16, 192-203.

Ditton, P., Green, R. J., & Singer, M. T. (1987). Communication deviance: A comparison between parents of learning-disabled and normal achieving students. Family Process, 26, 75-87.

Douglas, V. I. (1983). Attention and cognitive problems. In M. Rutter (Ed.), Developmental neuropsychiatry (pp. 280-329). New York: Guilford.

DuPaul, G. J., Guevremont, D. C., & Barkley, R. A. (1991). Attention deficit hyperactivity disorder in adolescence: Critical assessment parameters. Clinical Psychology Review, 11, 231-245.

Emery, R. E. (1982). Interparental conflict and the children of discord and divorce. Psychological Bulletin, 92, 310-330.

Goodman, R. and Stevenson, J. (1989). A twin study of hyperactivity-I. An examination of hyperactivity scores and categories derived from Rutter teacher and parent questionnaires. Journal of Child Psychology, 30, 671-689.

Goyette, G. H., Conners, C. K., & Ulrich, R. F. (1978). Normal data on revised Conners' Parent and Teachers Rating Scales. Journal of Abnormal Child Psychology, 6, 221-236.

Haley, J. (1976). Problem-solving therapy. San Francisco: Jossey-Bass.

Horn, W. F., Ialongo, N., Greenberge, G., Packard, T., & Smith-Winberry, C. (1990). Additive effects of behavioral parent training and self-control therapy with attention deficit hyperactivity disordered children. Journal of Clinical Child Psychology, 19, 98-110.

Jouriles, E. N., Bourge, W. J., & Farris, A. M. (1991). Marital adjustment and child conduct problems: A comparison of the correlation across subsamples. Journal of Consulting and Clinical Psychology, 59, 354-357.

Kaslow, F. W. (1979). The history of family therapy: A kaleidoscopic overview. Marriage and Family Review. San Francisco: Jossey-Bass.

Keeney, B. P., & Ross, J. M. (1985). Mind in therapy: Constructing systemic family therapies. New York: Basic Books

Keeney, T. J., Clemmons, R. L., Hudson, B. W., Lentz, G. A., Gicie, R. & Nair, P. (1971). Characteristics of children referral because of hyperactivity. Journal of Paediatrics, 79, 618-622.

L'Abate, L. (1986). Systematic family therapy. New York: Brummer/Mazel.

Lahey, B. B., Piacentini, J. C., McBurnett, K., Stone, P., Hartdage, S., & Hynd, G. (1988). Psychopathology in the parents of children with conduct disorder and hyperactivity. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 163-170.

Landers, S. (1987). Differing risk paths seen for hyperactive children. The American Psychological Monitor, 18, 11-19.

Lilienfeld, S. O., & Waldman, I. D. (1990). The relation between childhood attention deficit hyperactivity disorder and adult antisocial behaviour re-examined: The problem of heterogeneity. Clinical Psychology Review, 10, 699-725.

Locke, H. J., & Wallace, K. M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. Journal of Marriage and Family Living, 21, 251-255.

Madanes, C. (1981). Strategic family therapy. San Francisco: Jossey-Bass.

Madanes, C. (1984). Behind the one-way mirror: Advances in the practice of strategic therapy. San Francisco: Jossey-Bass.

Mash, E. J., and Johnston, C. (1982). A comparison of the mother child interactions of younger and older hyperactive and normal children. Child Development, 53, 1371-1381.

Minuchin, S. (1974). Family and family therapy. Cambridge, MA: Harvard University Press.

Minuchin, S., & Fishman, H. C. (1981). Family therapy techniques. Cambridge, MA: Harvard University Press.

Minuchin, S., Rosman, B. L., & Baker, L. (1978). Psychosomatic families: Anorexia Nervosa in context. Cambridge, MA: Harvard University Press.

Rapport, M. D., & Kelly, K. L. (1991). Psychostimulant effects on learning and cognitive function: Findings and implications for children with attention deficit hyperactivity disorder. Clinical Psychology Review, 11, 61-92.

Ritterman, M. K. (1978). Outcome study for family therapy, Ritalin and placebo treatments of hyperactivity: An open systems approach. Ann Arbor, MI: A. Bell & Howell.

Rosenberg. L. A., & Joshi, P. (1986). Effects of marital discord on parental reports on the child behaviour checklist. Psychological Reports, 59, 1255-1259.

Rutter, M. (1977). Brain damage syndromes in childhood: Concepts and findings. Journal of Child Psychology and Psychiatry, 18, 1-21.

Rutter, M. (1989). Attention deficit disorder/hyperkinetic syndrome: Conceptual and research issues regarding diagnosis and classification. In T. Sagvolden & T. Archer (Eds.), Attention deficit disorder: Clinical and basic research (pp. 1-24). Hillsdale, NJ: Erlbaum.

Sandberg, S. T., Wieselberg, M., & Shaffer, D. (1980). Hyperkinetic and conduct problem children in a primary school population: Some epidemiological considerations. Journal of Child Psychology, Psychiatry and Allied Disciplines, 21, 293-311.

Sanders, M. R., Dadds, M. R., & Bor, W. (1989). Contextual analysis of child opposition and maternal aversive behaviours in families of conduct-disordered and nonproblem children. Journal of Clinical Child Psychology, 18, 72-83.

Snyder, D. K. (1979). Multidimensional assessment of marital satisfaction. Journal of Marriage and the Family, November, 813-823.

Snyder, D. K. (1983). Clinical and research applications of the marital satisfaction inventory. In E. E. Filsinger (Ed.), Marriage and family assessment: A sourcebook for family therapy (pp.169-189). Beverly Hills: Sage.

Snyder, D. K. (1985). Marital Satisfaction Inventory (MSI) manual. Los Angeles: Western Psychological Services.

Taylor, E. A. (1986). Childhood hyperactivity. British Journal of Psychiatry, 149, 562-573.

Taylor, J. F. (1980). The hyperactive child and the family: The complete what-to-do handbook. New York: Everest.

Von Foerster, H. (1987, October). Workshop on Observing Systems. University of Alberta, Edmonton, AB.

Walsh, F., & Anderson, C. (1987). Chronic disorders and families: An overview. Journal of Psychotherapy & The Family, 3(3), 3-18.

Webster-Stratton, C. (1990). Long-term follow-up of families with young conduct problem children: From preschool to grade school. Journal of Clinical Child Psychology, 19, 144-149.

Webster-Stratton, C., & Hammond, M. (1990). Predictors of treatment outcome in parent training for families with conduct problem children. Behaviour Therapy, 2, 319-337.

Weiss, G., & Hechtman, L. T. (1986). Hyperactive children grown up: Empirical findings and theoretical considerations. New York: Guilford Press.

Whalen, C. K., Henker, B., Hinshaw, S. P., Heller, T. & Huber-Dressler, A. (1991). Messages of medication: Effects of actual versus informed medication status on hyperactive boys' expectancies and self-evaluations. Journal of Consulting and Clinical Psychology, 59, 602-606.

Whalen, C. K., Henker, B., Swanson, J. M., Granger, D., Kliewer, W., & Spencer, J. (1987). Natural social behaviours in hyperactive children: Dose effects of methylphenidate. Journal of Consulting and Clinical Psychology, 55, 187-193.

APPENDIX A

Letter

Gary J. Meiers, M.A
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Dear Parent

I am interested in investigating the effects of the pressures of raising a hyperactive child on parental/marital life. You have been specifically selected for my study, keeping in view that your responses may open new insights as to how therapeutic procedures can be most effective.

For this purpose, we are enclosing two copies of the Marital Satisfaction Inventory (MSI) and two copies of Conners' Parent Rating Scales, one for each of you. Please set aside some time to complete these questionnaires and return them using the return envelope as early as possible. Please remember it is important that both questionnaires be answered independently by each parent.

Please note that you and your child's identity will be kept completely confidential and only group scores will be presented in our final report. If you have any questions or clarifications regarding our study, please feel free to call Gary J. Meiers at 433-2269 during office hours. Thank you in anticipation of your cooperation.

Yours truly

Gary J. Meiers, M.A

GJM/rg

Encl.

APPENDIX B

Conners' Parent Rating Scale (CPRS)

0: Not at all
1: Just a Little
2: Pretty Much
3: Very Much

0 1 2 3	1.	Picks at things (nails, fingers hair, clothing)
0 1 2 3	2.	Sassy to grown-ups
0 1 2 3	3.	Problems with making or keeping friends
0 1 2 3	4.	Excitable, Impulsive
0 1 2 3	5.	Wants to run things
0 1 2 3	6.	Sucks or chews (thumb, clothing, blankets)
0 1 2 3	7.	Cries easily or often
0 1 2 3	8.	Carries a chip on his/her shoulder
0 1 2 3	9.	Daydreams
0 1 2 3	10.	Difficulty in learning
0 1 2 3	11.	Restless in the "squirmy" sense
0 1 2 3	12.	Fearful (of new situations, new people or places, going to school)
0 1 2 3	13.	Restless, always up and on the go
0 1 2 3	14.	Destructive
0 1 2 3	15.	Tells lies or stories that aren't true
0 1 2 3	16.	Shy
0 1 2 3	17.	Gets into more trouble than others same age
0 1 2 3	18.	Speaks differently from others same age (baby talk, stuttering, hard to understand)
0 1 2 3	19.	Denies mistakes or blames others
0 1 2 3	20.	Quarrelsome
0 1 2 3	21.	Pouts and sulks
0 1 2 3	22.	Steals
0 1 2 3	23.	Disobedient or obeys but resentfully
0 1 2 3	24.	Worries more than others (about being alone, illness or death)
0 1 2 3	25.	Fails to finish things
0 1 2 3	26.	Feelings easily hurt
0 1 2 3	27.	Bullies others
0 1 2 3	28.	Unable to stop a repetitive activity
0 1 2 3	29.	Cruel
0 1 2 3	30.	Childish or immature (wants help s/he shouln't need, clings, needs constant reassurance)
0 1 2 3	31.	Distractibility or attention span a problem
0 1 2 3	32.	Headaches
0 1 2 3	33.	Mood changes quickly and drastically
0 1 2 3	34.	Doesn't like or doesn't follow rules or restrictions
0 1 2 3	35.	Fights constantly
0 1 2 3	36.	Doesn't get along well with brothers or sisters
0 1 2 3	37.	Easily frustrated in efforts
0 1 2 3	38.	Disturbs other children
0 1 2 3	39.	Basically an unhappy child

Copyright Note

Pages 81 to 90 (The Marital Satisfaction Inventory (MSI) by Snyder, D. K. (1985) Los Angeles: Western Psychological Services) have been omitted from this particular copy of the dissertation due to copyright restrictions and is not available on microfiche.

APPENDIX D

Acknowledgements

I wish to express my respect and appreciation to those individuals whose support, encouragement and teachings have helped make this research possible. My deep appreciation to Dr. Allen R. Vander Well who has been a consistent force in my work. He has truly been a mentor. My appreciation to all of my committee members who have supported me in this research effort and encouraged my work and helped in my writing. To my wife, Jo Ann Hammond-Meiers who has had the patience of Job. Without her encouragement I would have given up the quest. A sincere thank you to all my teachers and supervisors in the area of psychotherapy and family therapy whose insights, strokes and kicks have helped me become a better therapist and person.